

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A composite rigid foam structure comprising:
a rigid reticulated foam substrate having a surface and pores, said pores having an average diameter, and
a formed in situ skin substantially uniformly bonded directly to at least a portion of said surface, said skin generally penetrating said rigid foam substrate to a depth of less than from about 1 to about 5 of said average pore diameters, said skin having an a substantially uniform interconnected porosity and adapted to allowing gas to flow through said skin and out of said composite rigid foam structure.
2. (previously presented): A composite structure of claim 1, wherein said rigid reticulated foam substrate comprises an inorganic material having at least about 20 pores per linear inch.
3. (previously presented): A composite structure of claim 1, wherein the rigid foam substrate and the skin are made of metals, ceramics, glasses, or inorganic polymers.
4. (withdrawn): The composite structure of claim 1, wherein at least one of said rigid reticulated foam substrate and skin comprises metal.

5. (withdrawn): The composite structure of claim 1, wherein said rigid reticulated foam substrate and said skin comprise different metals.

6. (original): The composite structure of claim 1, wherein at least one of said rigid reticulated foam substrate and skin comprises ceramic.

7. (withdrawn): The composite structure of claim 1, wherein said rigid reticulated foam substrate comprises carbon.

8. (withdrawn): The composite structure of claim 1, wherein at least one of said rigid reticulated foam substrate and skin comprises glass.

9. (withdrawn): The composite structure of claim 1, wherein said rigid reticulated foam substrate and said skin comprise polymers.

10. (withdrawn): The composite structure of claim 1, wherein one of said rigid reticulated foam substrate and said skin comprises metal and the other comprises ceramic.

11. (cancelled):

12. (original): The composite structure of claim 1 wherein the continuous skin has penetrated into said rigid reticulated foam substrate for a depth of less than approximately 2 average pore diameters.

13. (withdrawn): A method of forming a composite rigid foam structure comprising:

selecting a solid three-dimensional rigid foam substrate having at least one surface and pores, said pores in said foam substrate being defined by their peripheries and having an average diameter, and

thermally spraying a material that is at least partially fluid onto said surface to form a solid phase skin on said surface, said skin being attached to substantially all of said peripheries, and said skin extending no more than about 5 average pore diameters into said rigid foam substrate.

14. (withdrawn): A method of forming a composite foam structure of claim 13 including selecting a hollow three-dimensional rigid foam substrate having inner and outer surfaces, and thermally spraying said material on at least one of said inner and outer surfaces.

15. (currently amended): A composite rigid foam structure comprising:

a rigid reticulated foam substrate having a surface and pores, said pores having an average diameter, and

a formed in situ skin substantially uniformly bonded directly to at least a portion of said surface, said skin generally penetrating said rigid foam substrate to a depth of ~~less than~~ from about 1 to about 5 of said average pore diameters, said skin having a substantially uniform interconnected porosity and adapted to allowing substantially uniform gas flow through said skin and out of said composite rigid foam structure.

16. (currently amended): A composite rigid foam structure comprising:

a rigid reticulated foam substrate having a surface and pores, said pores having an average diameter, and

a formed in situ skin substantially uniformly bonded directly to at least a portion of said surface, said skin generally penetrating said rigid foam substrate to a depth of ~~less than~~ from about 1 to about 5 of said average pore diameters, said skin having ~~an~~ a substantially uniform interconnected porosity extending entirely therethrough and adapted to allowing transpiration cooling of said composite rigid foam structure.

17.(previously presented): A composite rigid foam structure comprising:
a rigid reticulated foam substrate comprising ceramic and having a surface and pores, said pores having an average diameter, and
a formed in situ skin comprising molybdenum disilicide, said skin being substantially uniformly bonded directly to at least a portion of said surface, said skin generally penetrating said rigid foam substrate to a depth of less than about 5 of said average pore diameters, said skin having an interconnected porosity and adapted to allowing gas to flow through said skin and out of said composite rigid foam structure.